



10-20-03

10 37 29  
# Reg. Fee  
withholdal #  
of Restriction  
#  
10-31-03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:

CROWDER ET AL.

Serial No.: 09/975,642

Filed: October 10, 2001

Atty. File No.: 3123-380

For: "MAGNETIC RECORDING HEAD  
PROTECTION"

Group Art Unit: 3729

Examiner: KIM, PAUL D.

PETITION UNDER RULE 1.144

"EXPRESS MAIL" MAILING LABEL NUMBER: EV331286482US  
DATE OF DEPOSIT: 10/17/03

I HEREBY CERTIFY THAT THIS PAPER OR FEE IS BEING  
DEPOSITED WITH THE UNITED STATES POSTAL SERVICE  
"EXPRESS MAIL POST OFFICE TO ADDRESSEE" SERVICE  
UNDER 37 CFR 1.10 ON THE DATE INDICATED ABOVE AND IS  
ADDRESSED TO THE COMMISSIONER FOR PATENTS, P.O.  
BOX 1450, ALEXANDRIA, VA 22313-1450.  
TYPED OR PRINTED NAME: Lori R. Brown

SIGNATURE: Lori R. Brown

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313  
Mail Stop: Petition

**RECEIVED**

OCT 27 2003

TECHNOLOGY CENTER R3700

Dear Sir:

Applicants hereby petition to the Commissioner under Rule 1.144 to reverse the Examiner's requirements of restriction. The Examiner has issued three restriction requirements in connection with this application. Applicants traversed each of the first two restriction requirements, the second of which was final. The Examiner's third restriction requirement reiterates the conclusions of the second restriction requirement. Accordingly, the matter is ripe for petition under Rule 1.144.

REMARKS

As initially filed, the application contained 63 claims. (A copy of Claims 1-63 as originally filed is attached at Tab A.)

In a first Office Action mailed May 13, 2003, the Examiner (Watko) stated that Claims 1-63 address two different inventions. (A copy of the May 13, 2003 Office Action is attached at Tab B.) More specifically, the Examiner stated that Claims 1-31 and 43-50 were drawn to a

10/23/2003 RMEBRAHT 00000079 09975642

01 FC:1460

130.00 0P

method for reducing corrosion of a head assembly during rework operations and methods of shipping and storing. In contrast, the Examiner stated that Claims 32-42 and 51-63 were drawn to an improvement and subcombination. (Tab B, ¶ 1.) In support of her position, the Examiner stated the product as claimed (Claims 32-42 and 51-63) can be made by another and materially different process, such as a process not involving a testing step. (Tab B, ¶ 2.) Therefore, the Examiner required Applicants to select claims directed to one of the two inventions for further prosecution and to withdraw the remaining claims.

Applicants traversed the Examiner's position in a Response filed June 9, 2003 and provisionally elected to continue prosecution with Claims 1-31 and 43-50. (A copy of Applicant's June 9, 2003 Amendment and Response to Restriction Requirement, with amended claims, is attached at Tab C.)

The Examiner (Kim) did not find the traversal persuasive, and in a second Office Action, mailed June 26, 2003, entered a second and further restriction requirement, asserting that Claims 1-31 (Group I) are drawn to a distinct and different invention than Claims 43-50 (Group II). (A copy of the June 26, 2003 Office Action is attached at Tab D.) More specifically, the Examiner stated Claims 1-31 (Group I) are directed to a method for reducing corrosion of a head element during rework operations and Claims 43-50 (Group II) are directed to a method of shipping a head element removed from a disk drive (Tab D, ¶ 4.). The Examiner further asserted that Claims 1-31 comprised a combination and Claims 43-50 comprised a subcombination. (Tab D, ¶ 5.) The Examiner also asserted that particular claims within Group I comprise seven different species, and particular claims within Group II comprise two different species. (*Id.*, ¶¶ 7-8.) This restriction requirement was final.

Applicants also traversed the second restriction requirement. (See, Amendment and Response to Restriction Requirement, mailed July 28, 2003, attached at Tab E). The Examiner was unpersuaded by Applicants' challenge and, in essence, entered a third restriction requirement reiterating his position from the second restriction requirement. (A copy of the Examiner's September 17, 2003 Office Action is attached at Tab F.) Because the Examiner's

position did not substantively change between the second and third restriction requirements, they will be addressed together.

First, the Examiner asserts that Claims 1-31 are directed to a different invention than are Claims 43-50 after the first Office Action stated that these claims are part of a single invention. (Tab B, ¶¶ 1, 2.) Putting aside the contradiction, the Examiner now states that Claims 1-31 belong in Class 29, Subclass 603.03 and Claims 43-50 belong in Class 29, Subclass 603.02. (Tab B, ¶ 4.) Applicants respectfully disagree with these separate classifications. The relevant subclassification hierarchy of Class 29 is as follows:

- Class 29 - Metal Working
- (subclass) 592 Method of Mechanical Manufacture
  - 592.1 Electrical Device Making
    - 602.1 Electromagnetic, transformer or inductor
      - 603.01 magnetic recording, reproducing, transducer
      - 603.02 including disassembly step
      - 603.03 making disc drive

Claim 1 recites "removing said head element from said housing of said disk drive," and claims 43 and 47 recite "removing said head element from said disk drive." For at least this reason, and contrary to the Examiner's position, Claims 1-31 and 43-50 are best classified together under Class 29, Subclass 603.02. All of these claims involve disassembly of a disk drive and, therefore, are more properly classified in Subclass 603.02 (including a disassembly step), rather than Subclass 603.03 (making of a disc drive). These claims are drawn to the same invention and should be examined as part of the same invention. The restriction requirement is improper and should be withdrawn.

Based upon the Examiner's reasoning as stated in the second restriction requirement (Tab D, ¶ 4), Applicants resubmitted previously non-elected Claims 32-42 and 51-63 in an amended form (Tab E). Based upon the amendments to the Claims, the Examiner's basis for maintaining restriction of Claims 32-42 and 51-63 is no longer present. More specifically, in paragraph 2 of the June 26, 2003 Office Action (Tab D), the Examiner asserts with respect to Claims 32-42 and

51-63 that “the product as claimed can be made by another and materially different process such as applying a protective coating to the head element prior to removal of the head element from the housing of the disk drive.” (Emphasis added.) As amended, Claim 32 recites “a protective coating applied to said head element after removal of said head element,” and Claim 51 recites “a protective coating on said head element applied after disassembly wherein disassembly includes removal of the head element from the disk drive.” Therefore, Claims 32-42 and 51-63 should remain in the present application and be examined with Claims 1-31 and 43-50 because Claims 32-42 and 51-63 preclude the materially different process the Examiner set forth. In response, in the Examiner’s third restriction requirement (Tab F), the Examiner did not rebut Applicants’ position. Rather, the Examiner simply stated that Claims 32-42 and 51-63 are product claims that have acquired a separate status in the art. However, this position ignores the need to establish a materially different process as the Examiner set forth in the prior Office Action (Tab D). In other words, even though Applicants squarely addressed the Examiner’s requirement, the Examiner has now chosen to ignore his own requirement. Therefore, Claims 32-42 and 51-63 as amended should proceed to examination with Claims 1-31 and 43-50.

The Examiner’s second basis for restriction is misplaced. With respect to paragraph 5 of the June 26, 2003 Office Action (Tab D), the Examiner’s proposed restriction requirement does not satisfy the threshold definition of Section 806.05(a) of the Manual of Patent Examining Procedures (MPEP). More specifically, Claims 1-31 and 43-50 do not satisfy the threshold definition of combination and subcombination. Under the definition of Section 806.05(a), an element does not qualify as a subcombination unless it is a necessary part of the combination. In other words, for the Examiner’s restriction to be correct, the Claims of Group I (1-31) must meet the definition of a combination and the claims of Group II (43-50) must meet the definition of a subcombination. The Claims do not meet these definitions. For example, if independent Claims 43 and 47 (purportedly subcombinations) recite elements that are not in Claim 1 (purportedly the combination), the Claims of Group I (1-31) and Group II (43-50) cannot be related as combination and subcombination. Here, Claim 43 recites “placing said head element into a

container” and “transporting said container,” and Claim 47 recites “placing said head in a storage container.” At least these elements are not found in Claim 1. Therefore, Claims 43 and 47 do not meet the definition of subcombination, e.g., they are not a necessary part of the combination. As a direct consequence, Claim 1 cannot meet the definition of combination.

Moreover, the Examiner’s subsequent response in the third restriction requirement did not resolve this fundamental defect. Contrary to the Examiner’s statement in paragraph 4, Applicants did not argue that there were features common to both Group I and Group II. Rather, Applicants asserted the opposite. Applicants established that the Examiner failed to meet his burden of proving that Groups I and II are a combination and subcombination. Applicants established that Claims 1-31 and 43-50 do not meet the definition of combination and subcombination. (See MPEP, § 806.05(a).) The fact that Claims 1-31 do not include a storage container element reinforces the correctness of Applicants’ position and the incorrect basis of the Examiner’s position. Claims 1-31 and 43-50 cannot be combination and subcombination. Therefore, the Examiner’s position that Claims 43-50 are a subcombination of the combination set forth in Claims 1-31 is incorrect. For at least this reason, the restriction requirement is improper and should be withdrawn.

Applicants further traverse the assertions made in paragraphs 7 and 8 of the June 26, 2003 Office Action (Tab D). In particular, the Examiner asserts that Groups I and II contain claims directed to patentably distinct species and further identifies which Claims are drawn to which species. However, pursuant to Section 806.04(e), MPEP, claims are never and cannot be species. Rather, species are the specifically different embodiments. Despite this requirement, the Examiner has defined whole Claims as being species. Moreover, even after pointing out this fundamental defect, the Examiner did not alter his position. Instead, in the third Office Action, Tab F, the Examiner simply stated “the coating process recited in Claims 3-6 and 9 are mutually exclusive of each other.” This statement clarifies nothing. The Examiner has not properly identified what species purportedly exist among the pending Claims. Due to the Examiner’s approach, Applicants are in a position where they cannot respond, and therefore cannot make

even a provisional election. There is simply insufficient information on which to make a determination and election.

Enclosed herewith is the fee under Section 1.17(h) of \$130.00. Any shortcomings to this fee may be charged to Deposit Account No. 19-1970.

By the foregoing, Applicants respectfully request that the Examiner's requirements for restriction be withdrawn, and the application as currently postured be allowed to proceed in examination.

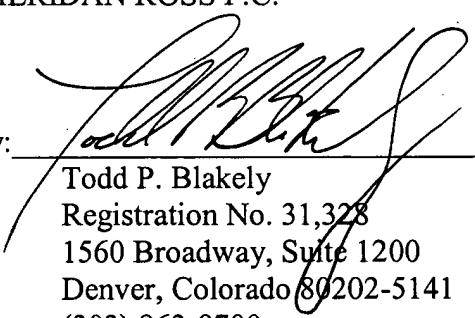
Respectfully submitted,

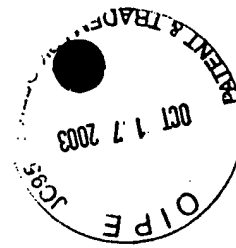
SHERIDAN ROSS P.C.

Date: \_\_\_\_\_

October 17, 2003

By: \_\_\_\_\_

  
Todd P. Blakely  
Registration No. 31,328  
1560 Broadway, Suite 1200  
Denver, Colorado 80202-5141  
(303) 863-9700



**PENDING CLAIMS AS ORIGINALLY FILED**

**What is claimed is:**

1. A method for reducing corrosion of a head element during rework operations, said head element being initially contained within the housing of an assembled disk drive, said method comprising the steps of:  
opening said housing of said disk drive;  
5 removing said head element from said housing of said disk drive; and  
applying a protective coating to said head element.
2. The method, as claimed in Claim 1, further comprising the step of cleaning said head element prior to said step of applying a protective coating.
3. The method, as claimed in Claim 1, wherein said protective coating is applied in a vacuum chamber.
4. The method, as claimed in Claim 1, wherein said protective coating is applied utilizing solvent-mediated deposition.
5. The method, as claimed in Claim 1, wherein said protective coating is applied utilizing vapor-mediated deposition.
6. The method, as claimed in Claim 1, wherein said step of applying a protective coating is performed by depositing precursor molecules in the vapor phase.
7. The method, as claimed in Claim 1, wherein said protective coating comprises a fluorocarbon polymer.
8. The method, as claimed in Claim 1, wherein said protective coating is a thickness of greater than 50.
9. The method, as claimed in Claim 1, further comprising the step of storing said head element following said step of applying said protective coating.

**RECEIVED**

**OCT 27 2003**

TECHNOLOGY CENTER #3700

10. The method, as claimed in Claim 1, further comprising the step of post-processing said protective coating to enhance its corrosion protection.

11. The method, as claimed in Claim 1, further comprising the step of reworking at least one component of said disk drive.

12. The method, as claimed in Claim 10, further comprising the step of removing at least a portion of said protective coating after said step of reworking said disk drive.

13. The method, as claimed in Claim 12, further comprising the step of reassembling said disk drive after said step of removing at least a portion of said protective coating.

14. The method, as claimed in Claim 11, further comprising the step of removing at least a portion of said protective coating from said head element after said step of reworking said disk drive.

15. The method, as claimed in Claim 14, further comprising the step of reassembling said disk drive after said step of removing at least a portion of said protective coating from said head element.

16. The method, as claimed in Claim 11, further comprising the step of removing at least a portion of said protective coating completely exposing said head element after said step of reworking said disk drive.

17. The method, as claimed in Claim 16, further comprising the step of reassembling said disk drive after said step of removing at least a portion of said protective coating completely exposing said head element.



18. The method, as claimed in Claim 13, further comprising the step of testing said disk drive after said step of reassembling said disk drive.

19. The method, as claimed in Claim 11, further comprising the combination step of simultaneously cleaning said head element while removing said protective coating, after said step of reworking said disk drive.

20. The method, as claimed in Claim 12, wherein said step of removing at least a portion of said protective coating is performed utilizing a solvent.

21. The method, as claimed in Claim 19, wherein said step of simultaneously cleaning said head element while removing said protective coating, is performed using a non-aqueous solvent.

22. The method, as claimed in Claim 10, wherein said post-processing step is performed by exposing said protective coating to a form of energy selected from the group consisting of infrared, ultraviolet, plasma, or radiant heat.

23. The method, as claimed in Claim 11, further comprising the step of reassembling the disk drive followed by the step of removing at least a portion of said protective coating.

24. The method, as claimed in Claim 23, further comprising the step of testing said disk drive.

25. The method, as claimed in Claim 13, further comprising the step of removing at least an additional portion of said protective coating after said step of reassembling the disk drive.

26. The method, as claimed in Claim 25, further comprising the step of testing said disk drive.

27. The method, as claimed in Claim 15, further comprising the step of removing at least an additional portion of said protective coating from said head element after said step of reassembling said disk drive.

28. The method, as claimed in Claim 27, further comprising the step of testing said disk drive.

29. The method, as claimed in Claim 1, wherein said protective coating thickness comprises at least one monolayer.

30. The method, as claimed in Claim 1, wherein said protective coating thickness comprises at least 50 angstroms.

31. The method, as claimed in Claim 1, wherein said protective coating is applied having a thickness up to approximately 250 angstroms.

32. In a disk drive having at least one head element, said disk drive having been opened after initial assembly for purposes of reworking, and the head element having been removed, the improvement comprising:

a protective coating applied to said head element to reduce corrosive effects from the surrounding atmosphere.

33. The improvement, as claimed in Claim 32, wherein said protective coating is applied in a vacuum chamber.

34. The improvement, as claimed in Claim 32, wherein said protective coating is applied utilizing a solvent-mediated deposition process.

35. The improvement, as claimed in Claim 32, wherein said protective coating is applied utilizing a vapor-mediated deposition process.

36. The improvement, as claimed in Claim 32, wherein said protective coating comprises a fluorocarbon polymer.

37. The improvement, as claimed in Claim 32, wherein said protective coating is a thickness of greater than 50.

38. The improvement, as claimed in Claim 32, wherein said protective coating is applied by depositing precursor molecules in the vapor phase.

39. The improvement, as claimed in Claim 32, wherein said protective coating is exposed to an energy source selected from the group consisting of infrared, ultraviolet, plasma, or radiant heat.

40. The method, as claimed in Claim 32, wherein said protective coating thickness comprises at least one monolayer.

41. The method, as claimed in Claim 32, wherein said protective coating thickness comprises at least 50 angstroms.

42. The method, as claimed in Claim 32, wherein said protective coating is applied having a thickness up to approximately 250 angstroms.

43. A method for shipping a head element removed from a disk drive, said method comprising the steps of:

- 5        removing said head element from said disk drive;  
         applying a protective coating to said head element;  
         placing said head element into a container; and,  
         transporting said container.

44. The method, as claimed in Claim 43, further comprising the step of cleaning said head element prior to said step of applying a protective coating.

45. The method, as claimed in Claim 43, further comprising the step of mounting said head element to a shipping comb.

46. The method, as claimed in Claim 45, wherein said step of applying a protective coating to said head element occurs following mounting said element to said shipping comb.

5 47. A method for storing a head element removed from a disk drive, said method comprising the steps of:

removing said head element from said disk drive;  
applying a protective coating to said head element; and,  
placing said head element in a storage container.

10 48. The method, as claimed in Claim 47, further comprising the step of cleaning said head element prior to said step of applying a protective coating.

49. The method, as claimed in Claim 47, further comprising the step of mounting said head element to a shipping comb.

50. The method, as claimed in Claim 49, wherein said step of applying a protective coating to said head element occurs following mounting said head element to said shipping comb.

51. In subcombination, from a disk drive that is disassembled and at least partially reworked, the subcombination comprising:

a head element for transferring data to and from said disk;

a protective coating on said head element applied after disassembly.

52. The subcombination, as claimed in Claim 51, further comprising a shipping comb, wherein said head element is mounted on said shipping comb.

53. The subcombination, as claimed in Claim 51, wherein said protective coating comprises polymeric fluorocarbon.

54. The subcombination, as claimed in Claim 51, wherein said protective coating is applied utilizing a solvent-mediated deposition process.

55. The subcombination, as claimed in Claim 51, wherein said protective coating is applied utilizing a vapor-mediated deposition process.

56. The subcombination, as claimed in Claim 51, wherein said protective coating is applied by depositing precursor molecules in the vapor phase.

57. The subcombination, as claimed in Claim 51, wherein said protective coating is a thickness of greater than 50 angstroms.

58. The subcombination, as claimed in Claim 57, wherein said protective coating is exposed to a solvent.

59. The subcombination, as claimed in Claim 54, wherein said protective coating is post-processed to enhance its corrosion protection.

60. The subcombination, as claimed in Claim 59, wherein said protective coating is exposed to an energy source selected from the group consisting of infrared, ultraviolet, plasma, or radiant heat.

61. The method, as claimed in Claim 51, wherein said protective coating thickness comprises at least one monolayer.

62. The method, as claimed in Claim 51, wherein said protective coating thickness comprises at least 50 angstroms.

63. The method, as claimed in Claim 51, wherein said protective coating is applied having a thickness up to approximately 250 angstroms.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,642	10/10/2001	Mark S. Crowder	3123-380	8359

22442 7590 05/13/2003

SHERIDAN ROSS PC  
1560 BROADWAY  
SUITE 1200  
DENVER, CO 80202

RECEIVED

MAY 19 2003

SHERIDAN, ROSS

EXAMINER

WATKO, JULIE ANNE

ART UNIT

PAPER NUMBER

2652

DATE MAILED: 05/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

RECEIVED

OCT 27 2003

TECHNOLOGY CENTER R3700

**Office Action Summary**

OCT 17 2003

U.S. PATENT & TRADEMARK OFFICE

Application No.

09/975,642

Applicant(s)

CROWDER ET AL.

Examiner

Julie Anne Watko

Art Unit

2652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-63 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-63 are subject to restriction and/or election requirement.

RECEIVED

OCT 27 2003

TECHNOLOGY CENTER R3700

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other:





RECEIVED

DETAILED ACTION

OCT 27 2003

*Election/Restrictions*

TECHNOLOGY CENTER R3700

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-31 and 43-50, drawn to a method for reducing corrosion of a head element during rework operations, and methods for shipping and storing, classified in class 29, subclass 603.03.
  - II. Claims 32-42 and 51-63, drawn to an improvement and a subcombination, classified in class 360, subclass 235.1.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process, such as a process not involving a testing step.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. It is noted by the Examiner that claims 40-42 and 61-63 nominally recite "The method" in line 1; however, none of these claims depends from a claim drawn to a method. For purposes of restriction only, these claims are presumed to be claims drawn to a product. If these claims

Art Unit: 2652

were later rewritten to definitely claim a method, then the claims would be grouped with the other method claims.

5. A telephone call was made to Todd P. Blakely (Reg. No. 31328) on April 22, 2003, to request an oral election to the above restriction requirement, but did not result in an election being made.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Anne Watko whose telephone number is (703) 305-7742. The examiner can normally be reached on Mon-Thurs 7:30-5 and alternate Fri 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (703) 305-9687. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9315 for After Final communications.

Art Unit: 2652

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Julie Anne Watko

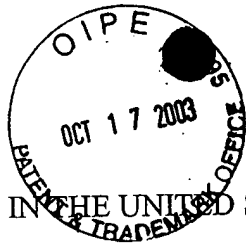
Examiner

Art Unit 2652

JAW

April 22, 2003

A handwritten signature in black ink, appearing to read 'Julie Anne Watko', written in a cursive style.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:

CROWDER ET AL.

Serial No.: 09/975,642

Filed: October 10, 2001

Atty. File No.: 3123-380

For: "MAGNETIC RECORDING  
HEAD PROTECTION"

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**RECEIVED**  
OCT 27 2003

) Group Art Unit: 2651

) Examiner: WATKO, JULIE ANNE

) AMENDMENT AND RESPONSE TO  
) RESTRICTION REQUIREMENT

CERTIFICATE OF MAILING

I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS  
BEING DEPOSITED WITH THE UNITED STATES  
POSTAL SERVICE AS FIRST CLASS MAIL IN AN  
ENVELOPE ADDRESSED TO THE COMMISSIONER FOR  
PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450  
ON June 9 2003

SHERIDAN ROSS P.C.

BY: Lori K. Brown

Dear Sir:

TECHNOLOGY CENTER R3700

In an Office Action dated May 13, 2003, the Examiner issued a Restriction Requirement with regard to the above-identified patent application. Specifically, the Examiner states that the application contains claims directed to two distinct inventions. The Examiner identifies the inventions as follows:

Group I: Claims 1-31 and 43-50, drawn to a method for reducing corrosion of a head element during rework operations, and methods for shipping and storing; and,

Group II: Claims 32-42 and 51-63, drawn to an improvement and a subcombination.

The Examiner further states that the inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product; or (2) that the product as claimed can be made by another and materially different process. (MPEP § 806.05(f)). In support of the Examiner's Restriction Requirement, the Examiner further

states that in the present application, the product as claimed can be made by another and materially different process, such as a process not involving a testing step.

Applicants respectfully traverse the Examiner's Restriction Requirement.

The Examiner's reasoning is perplexing. The only testing recited in Applicants' method claims is in dependent Claims 18, 24, 26 and 28. No other method claim recites testing as a claim element. Thus, the Examiner's reliance on a manufacturing process devoid of a testing step has relevance to only four claims. The Examiner's position does not support a restriction requirement with respect to the other claims. If anything, there is a significant overlap in the scope of the apparatus claims and method claims. Many of the product claims contain the same limitations as is found in the method claims. Although a product claim containing process limitations is considered a product claim for purposes of restriction (MPEP § 806.05(f)), for restriction to be proper there must be a serious burden placed on the Examiner by maintaining the two groups of claims in a single application. See MPEP § 803. In the present application, because of the overlapping nature of many claims, the scope of the search to be conducted by the Examiner, as well as the subsequent analysis of the claims in view of the search results, will be nearly identical for both groups of claims. Therefore, there is no burden on the Examiner, let alone a *serious* burden, by maintaining the claims in the same application and restriction is improper.

Applicants submit the Examiner has not sustained her burden of establishing that restriction is proper and, accordingly, respectfully submit that the application should proceed without restriction.

Subject to the above comments and in the event the traverse of the Restriction Requirement is unsuccessful, Applicants conditionally elect to prosecute the method claims of Group I, namely, Claims 1-31 and 43-50.

AMENDMENT

Paragraph 4 of the Office Action identifies potential issues regarding Claims 40-42 and 61-63. Applicants have further noted concerns regarding other claims. Therefore, please amend the above-identified patent application as follows:

### AMENDMENTS TO THE CLAIMS:

1. (Original): A method for reducing corrosion of a head element during rework operations, said head element being initially contained within the housing of an assembled disk drive, said method comprising the steps of:

opening said housing of said disk drive;

removing said head element from said housing of said disk drive; and

applying a protective coating to said head element.

2. (Original): The method, as claimed in Claim 1, further comprising the step of cleaning said head element prior to said step of applying a protective coating.

3. (Original): The method, as claimed in Claim 1, wherein said protective coating is applied in a vacuum chamber.

4. (Original): The method, as claimed in Claim 1, wherein said protective coating is applied utilizing solvent-mediated deposition.

5. (Original): The method, as claimed in Claim 1, wherein said protective coating is applied utilizing vapor-mediated deposition.

6. (Original): The method, as claimed in Claim 1, wherein said step of applying a protective coating is performed by depositing precursor molecules in the vapor phase.

7. (Original): The method, as claimed in Claim 1, wherein said protective coating comprises a fluorocarbon polymer.

8. (Currently Amended): The method, as claimed in Claim 1, wherein said protective coating is a thickness of greater than 50 angstroms.

9. (Original): The method, as claimed in Claim 1, further comprising the step of storing said head element following said step of applying said protective coating.

10. (Original): The method, as claimed in Claim 1, further comprising the step of post-processing said protective coating to enhance its corrosion protection.

11. (Original): The method, as claimed in Claim 1, further comprising the step of reworking at least one component of said disk drive.

12. (Original): The method, as claimed in Claim 10, further comprising the step of removing at least a portion of said protective coating after said step of reworking said disk drive.

13. (Original): The method, as claimed in Claim 12, further comprising the step of reassembling said disk drive after said step of removing at least a portion of said protective coating.

14. (Original): The method, as claimed in Claim 11, further comprising the step of removing at least a portion of said protective coating from said head element after said step of reworking said disk drive.

15. (Original): The method, as claimed in Claim 14, further comprising the step of reassembling said disk drive after said step of removing at least a portion of said protective coating from said head element.

16. (Original): The method, as claimed in Claim 11, further comprising the step of removing at least a portion of said protective coating completely exposing said head element after said step of reworking said disk drive.



17. (Original): The method, as claimed in Claim 16, further comprising the step of reassembling said disk drive after said step of removing at least a portion of said protective coating completely exposing said head element.

18. (Original): The method, as claimed in Claim 13, further comprising the step of testing said disk drive after said step of reassembling said disk drive.

19. (Original): The method, as claimed in Claim 11, further comprising the combination step of simultaneously cleaning said head element while removing said protective coating, after said step of reworking said disk drive.

20. (Original): The method, as claimed in Claim 12, wherein said step of removing at least a portion of said protective coating is performed utilizing a solvent.

21. (Original): The method, as claimed in Claim 19, wherein said step of simultaneously cleaning said head element while removing said protective coating, is performed using a non-aqueous solvent.

22. (Original): The method, as claimed in Claim 10, wherein said post-processing step is performed by exposing said protective coating to a form of energy selected from the group consisting of infrared, ultraviolet, plasma, or radiant heat.

23. (Original): The method, as claimed in Claim 11, further comprising the step of reassembling the disk drive followed by the step of removing at least a portion of said protective coating.

24. (Original): The method, as claimed in Claim 23, further comprising the step of testing said disk drive.

25. (Original): The method, as claimed in Claim 13, further comprising the step of removing at least an additional portion of said protective coating after said step of reassembling the disk drive.

26. (Original): The method, as claimed in Claim 25, further comprising the step of testing said disk drive.

27. (Original): The method, as claimed in Claim 15, further comprising the step of removing at least an additional portion of said protective coating from said head element after said step of reassembling said disk drive.

28. (Original): The method, as claimed in Claim 27, further comprising the step of testing said disk drive.

29. (Original): The method, as claimed in Claim 1, wherein said protective coating thickness comprises at least one monolayer.

30. (Original): The method, as claimed in Claim 1, wherein said protective coating thickness comprises at least 50 angstroms.

31. (Original): The method, as claimed in Claim 1, wherein said protective coating is applied having a thickness up to approximately 250 angstroms.

32. (Original): In a disk drive having at least one head element, said disk drive having been opened after initial assembly for purposes of reworking, and the head element having been removed, the improvement comprising:

a protective coating applied to said head element to reduce corrosive effects from the surrounding atmosphere.

33. (Original): The improvement, as claimed in Claim 32, wherein said protective coating is applied in a vacuum chamber.

34. (Original): The improvement, as claimed in Claim 32, wherein said protective coating is applied utilizing a solvent-mediated deposition process.

35. (Original): The improvement, as claimed in Claim 32, wherein said protective coating is applied utilizing a vapor-mediated deposition process.

36. (Original): The improvement, as claimed in Claim 32, wherein said protective coating comprises a fluorocarbon polymer.

37. (Currently Amended): The improvement, as claimed in Claim 32, wherein said protective coating is a thickness of greater than 50 angstroms.

38. (Original): The improvement, as claimed in Claim 32, wherein said protective coating is applied by depositing precursor molecules in the vapor phase.

39. (Original): The improvement, as claimed in Claim 32, wherein said protective coating is exposed to an energy source selected from the group consisting of infrared, ultraviolet, plasma, or radiant heat.

40. (Currently Amended): The improvementmethod, as claimed in Claim 32, wherein said protective coating thickness comprises at least one monolayer.

41. (Currently Amended): The improvementmethod, as claimed in Claim 32, wherein said protective coating thickness comprises at least 50 angstroms.

42. (Currently Amended): The improvementmethod, as claimed in Claim 32, wherein said protective coating is applied having a thickness up to approximately 250 angstroms.

43. (Original): A method for shipping a head element removed from a disk drive, said method comprising the steps of:

removing said head element from said disk drive;  
applying a protective coating to said head element;  
placing said head element into a container; and,  
transporting said container.

44. (Original): The method, as claimed in Claim 43, further comprising the step of cleaning said head element prior to said step of applying a protective coating.

45. (Original): The method, as claimed in Claim 43, further comprising the step of mounting said head element to a shipping comb.

46. (Original): The method, as claimed in Claim 45, wherein said step of applying a protective coating to said head element occurs following mounting said element to said shipping comb.

47. (Original): A method for storing a head element removed from a disk drive, said method comprising the steps of:

removing said head element from said disk drive;  
applying a protective coating to said head element; and,  
placing said head element in a storage container.

48. (Original): The method, as claimed in Claim 47, further comprising the step of cleaning said head element prior to said step of applying a protective coating.

49. (Original): The method, as claimed in Claim 47, further comprising the step of mounting said head element to a shipping comb.

50. (Original): The method, as claimed in Claim 49, wherein said step of applying a protective coating to said head element occurs following mounting said head element to said shipping comb.

51. (Original): In subcombination, from a disk drive that is disassembled and at least partially reworked, the subcombination comprising:

a head element for transferring data to and from said disk;

a protective coating on said head element applied after disassembly.

52. (Original): The subcombination, as claimed in Claim 51, further comprising a shipping comb, wherein said head element is mounted on said shipping comb.

53. (Original): The subcombination, as claimed in Claim 51, wherein said protective coating comprises polymeric fluorocarbon.

54. (Original): The subcombination, as claimed in Claim 51, wherein said protective coating is applied utilizing a solvent-mediated deposition process.

55. (Original): The subcombination, as claimed in Claim 51, wherein said protective coating is applied utilizing a vapor-mediated deposition process.

56. (Original): The subcombination, as claimed in Claim 51, wherein said protective coating is applied by depositing precursor molecules in the vapor phase.

57. (Original): The subcombination, as claimed in Claim 51, wherein said protective coating is a thickness of greater than 50 angstroms.

58. (Original): The subcombination, as claimed in Claim 57, wherein said protective coating is exposed to a solvent.

59. (Original): The subcombination, as claimed in Claim 54, wherein said protective coating is post-processed to enhance its corrosion protection.

60. (Original): The subcombination, as claimed in Claim 59, wherein said protective coating is exposed to an energy source selected from the group consisting of infrared, ultraviolet, plasma, or radiant heat.

61. (Currently Amended): The subcombinationmethod, as claimed in Claim 51, wherein said protective coating thickness comprises at least one monolayer.

62. (Currently Amended): The subcombinationmethod, as claimed in Claim 51, wherein said protective coating thickness comprises at least 50 angstroms.

63. (Currently Amended): The subcombinationmethod, as claimed in Claim 51, wherein said protective coating is applied having a thickness up to approximately 250 angstroms.

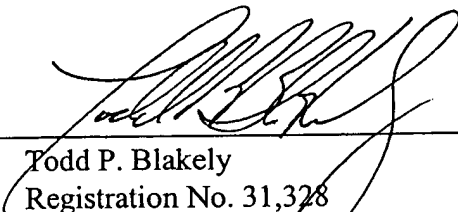
REMARKS/ARGUMENTS

In the event that a telephone conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

Respectfully submitted,

SHERIDAN ROSS P.C.

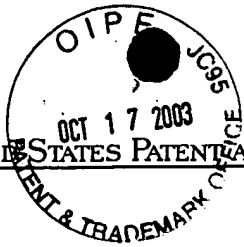
By: \_\_\_\_\_

  
Todd P. Blakely  
Registration No. 31,328  
1560 Broadway, Suite 1200  
Denver, Colorado 80202-5141  
(303) 863-9700

Date: \_\_\_\_\_

*June 9, 2003*

J:\3123\380\RESTRICTION REQUIREMENT.wpd



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,642	10/10/2001	Mark S. Crowder	3123-380	8359

22442 7590 06/26/2003  
SHERIDAN ROSS PC  
1560 BROADWAY  
SUITE 1200  
DENVER, CO 80202

RECEIVED

JUN 30 2003

SHERIDAN, ROSS

EXAMINER

KIM, PAUL D

ART UNIT

PAPER NUMBER

3729

DATE MAILED: 06/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

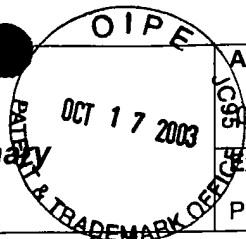
RECEIVED

OCT 27 2003

TECHNOLOGY CENTER R3700



**Office Action Summary**



Application No.

9/975,642

Examiner

Paul D Kim

Applicant(s)

CROWDER ET AL.

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-63 is/are pending in the application.
- 4a) Of the above claim(s) 32-42 and 51-63 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-31 and 43-50 are subject to restriction and/or election requirement.

**RECEIVED**

**OCT 27 2003**

TECHNOLOGY CENTER R3700

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. This office action is a response to the restriction requirement filed on 6/12/2003.

#### *Response to the Restriction Requirement*

2. Applicant's election with traverse of Group I, claims 1-31 and 43-50, in Paper No. 6 is acknowledged. The traversal is on the ground(s) that no other method claim recites testing as a claim element. This is not found persuasive because even though there is no testing process in the claimed invention, the product as claimed can be made by another and materially different process such as applying a protecting coating to the head element prior to remove the head element from the housing of the disk drive.

The requirement is still deemed proper and is therefore **made FINAL**.

3. Claims 32-42 and 51-63 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 6.

4. Upon further consideration, restriction to one of the following inventions of elected claims is required under 35 U.S.C. 121:

- I. Claims 1-31, drawn to a method for reducing corrosion of a head element during rework operations, classified in class 29, subclass 603.03.
- II. Claims 43-50, drawn to a method for shipping a head element removed from a disk drive, classified in class 29, subclass 603.02.

Art Unit: 3729

5. Inventions Group I and II are related as combination and subcombination.

Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination (Group I) as claimed does not require the particulars of the subcombination (Group II) as claimed because the combination (Group I) as claimed does not require the particulars of the subcombination (Group II) such as transporting the container. The subcombination has separate utility such as a process of transporting.

6. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

7. If applicant elects Group I, this application contains claims directed to the following patentably distinct species of the claimed invention:

Species A, drawn to claim 3.

Species B, drawn to claim 4.

Species C, drawn to claim 5.

Species D, drawn to claim 6.

Species E, drawn to claim 9.

Species F, drawn to claims 10, 12, 13, 18, 20, 22, 25 and 26.

Species G, drawn to claims 11, 14-17, 19, 21, 23, 24, 27 and 28.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 1, 2, 7, 8 and 29-31 are generic claims to Group I.

8. If applicant elects Group II, this application contains claims directed to the following patentably distinct species of the claimed invention:

Species H, drawn to claims 44 and 48.

Species I, drawn to claims 45, 46, 49 and 50.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 43 and 47 are generic claims to Group II.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Art Unit: 3729

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

9. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul D Kim whose telephone number is 703-308-8356. The examiner can normally be reached on Tuesday-Friday between 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Art Unit: 3729

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5648.

pdk  
June 25, 2003

A handwritten signature in black ink, appearing to read 'A. Dexter Tugbang', with a stylized flourish at the end.

**A. DEXTER TUGBANG  
PRIMARY EXAMINER**

OCT 17 2003  
PATENT & TRADEMARK OFFICE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of

CROWDER ET AL.

Serial No.: 09/975,642

Filed: October 10, 2001

Atty. File No.: 3123-380

For: "MAGNETIC RECORDING  
HEAD PROTECTION"

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

This is in response to the Office Action mailed June 26, 2003. Therein, the Examiner asserts a second Restriction Requirement with regard to the present application. Specifically, the Examiner asserts that Claims 1-31 and 43-50 are subject to further restriction. The Examiner imposed a first restriction requirement in an Office Action mailed May 13, 2003.

) Group Art Unit: 3729

) Examiner: KIM, PAUL D.

) AMENDMENT AND RESPONSE TO  
) RESTRICTION REQUIREMENT

"EXPRESS MAIL" MAILING LABEL NUMBER: EV331286425US  
DATE OF DEPOSIT: 7/28/03

I HEREBY CERTIFY THAT THIS PAPER OR FEE IS BEING DEPOSITED  
WITH THE UNITED STATES POSTAL SERVICE "EXPRESS MAIL POST  
OFFICE TO ADDRESSEE" SERVICE UNDER 37 CFR 1.10 ON THE DATE  
INDICATED ABOVE AND IS ADDRESSED TO THE COMMISSIONER FOR  
PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450.  
TYPED OR PRINTED NAME: Lori R. Brown

SIGNATURE: *Lori R. Brown*

RECEIVED

OCT 27 2003

TECHNOLOGY CENTER R3700

## AMENDMENTS TO THE CLAIMS

Please amend the Claims as follows:

1. (Original): A method for reducing corrosion of a head element during rework operations, said head element being initially contained within the housing of an assembled disk drive, said method comprising the steps of:  
  
    opening said housing of said disk drive;  
  
    removing said head element from said housing of said disk drive; and  
  
    applying a protective coating to said head element.
2. (Original): The method, as claimed in Claim 1, further comprising the step of cleaning said head element prior to said step of applying a protective coating.
3. (Original): The method, as claimed in Claim 1, wherein said protective coating is applied in a vacuum chamber.
4. (Original): The method, as claimed in Claim 1, wherein said protective coating is applied utilizing solvent-mediated deposition.
5. (Original): The method, as claimed in Claim 1, wherein said protective coating is applied utilizing vapor-mediated deposition.
6. (Original): The method, as claimed in Claim 1, wherein said step of applying a protective coating is performed by depositing precursor molecules in the vapor phase.
7. (Original): The method, as claimed in Claim 1, wherein said protective coating comprises a fluorocarbon polymer.
8. (Previously Amended): The method, as claimed in Claim 1, wherein said protective coating is a thickness of greater than 50 angstroms.



9. (Original): The method, as claimed in Claim 1, further comprising the step of storing said head element following said step of applying said protective coating.

10. (Original): The method, as claimed in Claim 1, further comprising the step of post-processing said protective coating to enhance its corrosion protection.

11. (Original): The method, as claimed in Claim 1, further comprising the step of reworking at least one component of said disk drive.

12. (Original): The method, as claimed in Claim 10, further comprising the step of removing at least a portion of said protective coating after said step of reworking said disk drive.

13. (Original): The method, as claimed in Claim 12, further comprising the step of reassembling said disk drive after said step of removing at least a portion of said protective coating.

14. (Original): The method, as claimed in Claim 11, further comprising the step of removing at least a portion of said protective coating from said head element after said step of reworking said disk drive.

15. (Original): The method, as claimed in Claim 14, further comprising the step of reassembling said disk drive after said step of removing at least a portion of said protective coating from said head element.

16. (Original): The method, as claimed in Claim 11, further comprising the step of removing at least a portion of said protective coating completely exposing said head element after said step of reworking said disk drive.

17. (Original): The method, as claimed in Claim 16, further comprising the step of reassembling said disk drive after said step of removing at least a portion of said protective coating completely exposing said head element.

18. (Original): The method, as claimed in Claim 13, further comprising the step of testing said disk drive after said step of reassembling said disk drive.

19. (Original): The method, as claimed in Claim 11, further comprising the combination step of simultaneously cleaning said head element while removing said protective coating, after said step of reworking said disk drive.

20. (Original): The method, as claimed in Claim 12, wherein said step of removing at least a portion of said protective coating is performed utilizing a solvent.

21. (Original): The method, as claimed in Claim 19, wherein said step of simultaneously cleaning said head element while removing said protective coating, is performed using a non-aqueous solvent.

22. (Original): The method, as claimed in Claim 10, wherein said post-processing step is performed by exposing said protective coating to a form of energy selected from the group consisting of infrared, ultraviolet, plasma, or radiant heat.

23. (Original): The method, as claimed in Claim 11, further comprising the step of reassembling the disk drive followed by the step of removing at least a portion of said protective coating.

24. (Original): The method, as claimed in Claim 23, further comprising the step of testing said disk drive.

25. (Original): The method, as claimed in Claim 13, further comprising the step of removing at least an additional portion of said protective coating after said step of reassembling the disk drive.

26. (Original): The method, as claimed in Claim 25, further comprising the step of testing said disk drive.

27. (Original): The method, as claimed in Claim 15, further comprising the step of removing at least an additional portion of said protective coating from said head element after said step of reassembling said disk drive.

28. (Original): The method, as claimed in Claim 27, further comprising the step of testing said disk drive.

29. (Original): The method, as claimed in Claim 1, wherein said protective coating thickness comprises at least one monolayer.

30. (Original): The method, as claimed in Claim 1, wherein said protective coating thickness comprises at least 50 angstroms.

31. (Original): The method, as claimed in Claim 1, wherein said protective coating is applied having a thickness up to approximately 250 angstroms.

32. (Currently Amended): In a disk drive having at least one head element, said disk drive having been opened after initial assembly for purposes of reworking, and the head element having been removed, the improvement comprising:

a protective coating applied to said head element after removal of the head element to reduce corrosive effects from the surrounding atmosphere.

33. (Original): The improvement, as claimed in Claim 32, wherein said protective coating is applied in a vacuum chamber.

34. (Original): The improvement, as claimed in Claim 32, wherein said protective coating is applied utilizing a solvent-mediated deposition process.

35. (Original): The improvement, as claimed in Claim 32, wherein said protective coating is applied utilizing a vapor-mediated deposition process.

36. (Original): The improvement, as claimed in Claim 32, wherein said protective coating comprises a fluorocarbon polymer.

37. (Previously Amended): The improvement, as claimed in Claim 32, wherein said protective coating is a thickness of greater than 50 angstroms.

38. (Original): The improvement, as claimed in Claim 32, wherein said protective coating is applied by depositing precursor molecules in the vapor phase.

39. (Original): The improvement, as claimed in Claim 32, wherein said protective coating is exposed to an energy source selected from the group consisting of infrared, ultraviolet, plasma, or radiant heat.

40. (Previously Amended): The improvement, as claimed in Claim 32, wherein said protective coating thickness comprises at least one monolayer.

41. (Previously Amended): The improvement, as claimed in Claim 32, wherein said protective coating thickness comprises at least 50 angstroms.

42. (Previously Amended): The improvement, as claimed in Claim 32, wherein said protective coating is applied having a thickness up to approximately 250 angstroms.

43. (Original): A method for shipping a head element removed from a disk drive, said method comprising the steps of:

removing said head element from said disk drive;

applying a protective coating to said head element;

placing said head element into a container; and,

transporting said container.

44. (Original): The method, as claimed in Claim 43, further comprising the step of cleaning said head element prior to said step of applying a protective coating.

45. (Original): The method, as claimed in Claim 43, further comprising the step of mounting said head element to a shipping comb.

46. (Original): The method, as claimed in Claim 45, wherein said step of applying a protective coating to said head element occurs following mounting said element to said shipping comb.

47. (Original): A method for storing a head element removed from a disk drive, said method comprising the steps of:

removing said head element from said disk drive;

applying a protective coating to said head element; and,

placing said head element in a storage container.

48. (Original): The method, as claimed in Claim 47, further comprising the step of cleaning said head element prior to said step of applying a protective coating.

49. (Original): The method, as claimed in Claim 47, further comprising the step of mounting said head element to a shipping comb.

50. (Original): The method, as claimed in Claim 49, wherein said step of applying a protective coating to said head element occurs following mounting said head element to said shipping comb.

51. (Currently Amended): In subcombination, from a disk drive that is disassembled and at least partially reworked, the subcombination comprising:

a head element for transferring data to and from said disk;

a protective coating on said head element applied after disassembly wherein disassembly includes removal of the head element from the disk drive.

52. (Original): The subcombination, as claimed in Claim 51, further comprising a shipping comb, wherein said head element is mounted on said shipping comb.

53. (Original): The subcombination, as claimed in Claim 51, wherein said protective coating comprises polymeric fluorocarbon.

54. (Original): The subcombination, as claimed in Claim 51, wherein said protective coating is applied utilizing a solvent-mediated deposition process.

55. (Original): The subcombination, as claimed in Claim 51, wherein said protective coating is applied utilizing a vapor-mediated deposition process.

56. (Original): The subcombination, as claimed in Claim 51, wherein said protective coating is applied by depositing precursor molecules in the vapor phase.

57. (Original): The subcombination, as claimed in Claim 51, wherein said protective coating is a thickness of greater than 50 angstroms.

58. (Original): The subcombination, as claimed in Claim 57, wherein said protective coating is exposed to a solvent.

59. (Original): The subcombination, as claimed in Claim 54, wherein said protective coating is post-processed to enhance its corrosion protection.

60. (Original): The subcombination, as claimed in Claim 59, wherein said protective coating is exposed to an energy source selected from the group consisting of infrared, ultraviolet, plasma, or radiant heat.

61. (Previously Amended): The subcombination, as claimed in Claim 51, wherein said protective coating thickness comprises at least one monolayer.

62. (Previously Amended): The subcombination, as claimed in Claim 51, wherein said protective coating thickness comprises at least 50 angstroms.

63. (Previously Amended): The subcombination, as claimed in Claim 51, wherein said protective coating is applied having a thickness up to approximately 250 angstroms.

### REMARKS

In an Office Action mailed May 13, 2003, the Examiner stated that the application as originally filed, containing Claims 1-63, addressed two different inventions. Applicants traversed the Examiner's position in a Response filed June 9, 2003. The Examiner did not find the traversal persuasive, and in a second Office Action, mailed June 26, 2003, entered a second restriction requirement, asserting that Claims 1-31, drawn to a method for reducing corrosion of a head element during rework operations, is a distinct and different invention from Claims 43-50, drawn to a method of shipping a head element removed from a disk drive.

As a first matter, Applicants submit Claims 1-31 and 43-50 address reducing corrosion of a head element during rework operations with the head element removed from the disk drive. For at least this reason, and contrary to the Examiner's assertions, Claims 1-31 and 43-50 are best classified together under Class 29, Subclass 603.02. All of these claims involve disassembly of a disk drive and, therefore, are more properly classified in Subclass 603.02, rather than the making of a disk drive (Class 603.03). These claims are drawn to the same invention and should be examined as part of the same invention. The restriction requirement is improper and should be withdrawn.

In addition, Applicants resubmit Claims 32-42 and 51-63 in amended form. Like Claims 1-31 and 43-50, amended Claims 32-42 and 51-63 now address reducing corrosion of a head element during rework operations with the head element removed from the disk drive. Therefore, the Examiner's basis for maintaining restriction of Claims 32-42 and 51-63 is no longer present. More specifically, in paragraph 2 of the present Office Action, the Examiner asserts with respect to Claims 32-42 and 51-63 that "the product as claimed can be made by another and materially different process such as applying a protective coating to the head element prior to removal of the head



element from the housing of the disk drive.” As amended, Claims 32-42 and 51-63 recite that the head element is removed from the disk drive. For at least these reasons, Claims 32-42 and 51-63 should remain in the present application and be examined with Claims 1-31 and 43-50 because each claim recites that the head element is removed from the disk drive.

With respect to paragraph 5 of the present Office Action, the Examiner’s proposed restriction requirement does not satisfy the threshold definition of Section 806.05(a) of the Manual of Patent Examining Procedures (MPEP). Under the definition of Section 806.05(a), an element does not qualify as a subcombination unless it is a necessary part of the combination. In other words, for the Examiner’s restriction to be correct, the Claims of Group I (1-31) must meet the definition of a combination and the claims of Group II (43-50) must meet the definition of a subcombination. For example, there cannot be elements in independent Claims 43 and 47 that are not in Claim 1. This is not the case. Claim 43 generally includes placing a head in a container and transporting the container. Claim 47 includes placing the head in a storage container. At least these elements are not found in Claim 1. Therefore, Claims 43 and 47 do not meet the definition of subcombination, e.g., they are not a necessary part of the combination. As a direct consequence, Claim 1 cannot meet the definition of combination. Therefore, the Examiner’s position that Claims 43-50 are a subcombination of the combination set forth in Claims 1-31 is incorrect. For at least this reason, the restriction requirement is improper and should be withdrawn.

Applicants further traverse the assertions made in paragraphs 7 and 8 of the Office Action. In particular, the Examiner asserts that Groups I and II contain claims directed to patentably distinct species and further identifies which claims are drawn to which species. However, pursuant to Section 806.04(e), MPEP, claims are never and cannot be species. Rather, species are the



RECEIVED

SEP 19 2003

UNITED STATES PATENT AND TRADEMARK OFFICE

SHERIDAN, ROSS

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,642	10/10/2001	Mark S. Crowder	3123-380	8359

22442 7590 09/17/2003

SHERIDAN ROSS PC  
1560 BROADWAY  
SUITE 1200  
DENVER, CO 80202

EXAMINER

KIM, PAUL D

ART UNIT

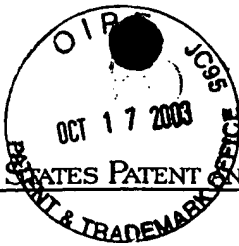
PAPER NUMBER

3729

DATE MAILED: 09/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

RECEIVED  
OCT 27 2003  
TECHNOLOGY CENTER R3700



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,642	10/10/2001	Mark S. Crowder	3123-380	8359

22442 7590  
SHERIDAN ROSS PC  
1560 BROADWAY  
SUITE 1200  
DENVER, CO 80202

EXAMINER

KIM, PAUL D

ART UNIT PAPER NUMBER

3729

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

5

RECEIVED  
OCT 27 2003  
TECHNOLOGY CENTER R3700

### DETAILED ACTION

1. The reply filed on 7/28/2003 is not fully responsive to the prior Office Action, Restriction Requirement in Paper No. 8.
2. Applicants fail to response to the prior office action to the restriction requirement by a provisional election in Paper No. 8.
3. An argument is that the restriction requirement is not appropriated and all claims are related each other. Examiner explains to the applicants as set forth in Paper No. 7.
4. Claims 32-42 and 51-63 are the product claims so that these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

The applicant argues that because there are several combined features that are common to both Group I (combination) and Group II (subcombination), that the restriction requirement must be withdrawn. The examiner maintains that the inventions between Group I (combination) and Group II (subcombination) are distinct in that Group I (combination) does not require the specific "storage container" as required by Group II (subcombination). In other word, there is no "storage container" even recited in claims 1-31. Thus, Group II (subcombination) has separate utility with the use of a "storage container".

The applicant argues that Group I and II do not contain claims directed patentable distinct species. For example, however, the coating processes recited in claims 3-6 and 9 are Mutually exclusive each other.

Art Unit: 3729

5. Since the above-mentioned reply appears to be *bona fide*, applicant is given **ONE (1) MONTH or THIRTY (30) DAYS** from the mailing date of this notice, whichever is longer, within which to supply the omission or correction in order to avoid abandonment. EXTENSIONS OF THIS TIME PERIOD MAY BE GRANTED UNDER 37 CFR 1.136(a).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul D Kim whose telephone number is 703-308-8356. The examiner can normally be reached on Tuesday-Friday between 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5648.

pdk

A handwritten signature in black ink, appearing to read 'PETER VO', with a long horizontal flourish extending to the right.

PETER VO  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700